

ABSTRACT

An apparatus is provided for indicating the wall thickness of a cored welding wire traveling in a given path to determine the percentage of volume of fill. This apparatus comprises a first induction coil surrounding the path; a source of AC current connected across the coil; a second reference coil connected to the AC source where the second reference coil surrounds a fixed section of cored welding wire with a desired wall thickness, and an output device indicating deviation of the wall thickness of the traveling wire from the wall thickness of the fixed section of wire by detecting the inductive reactance of the first coil compared to the second coil.